

Science Data Production Confidence Test - SFQ2

Overview and Scope:

Production of science data is one of the main reasons for the existence of the ECS DAAC. It is mandatory that the DAAC have the ability to produce a days worth of science data with capacity to spare. This spare capacity will be used for unanticipated climactic events, reprocessing of data using updated science algorithms and other corrected ancillary data. Additionally, an ECS DAAC must support both an automated and SCF Quality Assurance program, ensuring the usefulness of the science data produced. Finally, an ECS DAAC must have the capability to sustain daily operations even when hardware failures impact the availability of equipment resources. This test will verify these necessary capabilities at all of the DAACs and their associated SCFs as applicable.

Test Objectives:

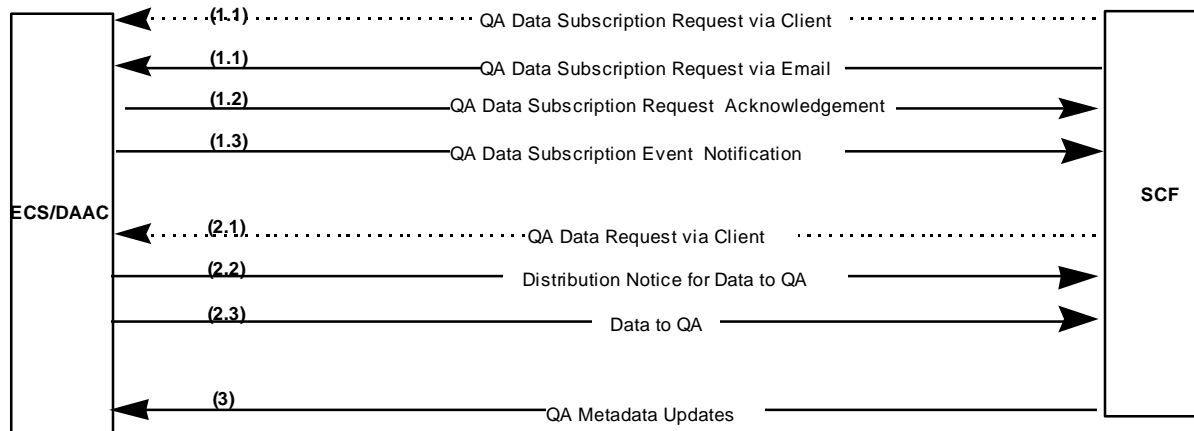
This test verifies requirements associated with the science data production functionality of the ECS. The objectives of this test are:

- to verify at each DAAC that the science operations team can plan, schedule, and execute a representative typical daily production run (one that will stress the system), including re-processing requests, using Autosys with dependencies. Production reports are generated and verified. Where appropriate the push of data from DAAC-to-DAAC is verified. Additionally, end user notification is verified
- to verify at appropriate DAACs the QA functionality as it relates to the data production environment; the science operations team can conduct quality assurance (QA) checks on completed data, and the investigator team can conduct remote QA from the Science Computing Facility (SCF). The information management service (IMS) is queried to verify proper metadata generation.
- to verify that at the appropriate DAAC, a science data production run utilizing PGEs with InterDAAC dependencies, and dynamic acquire and run.
- to verify at each DAAC the ability to implement appropriate actions in response to various emergency / priority situations. This includes but is not limited to, hardware failure, overload of system resources, and systems maintenance.

Test Configuration:

Hardware and software configurations at each ECS site are managed and tracked by the M&O organization at that site. The most current configuration status report will be obtained prior to the start of testing and be referenced in the test report.

The data flow for test SFQ2.006 and SFQ2.007 is depicted in exhibit 2-1.



Notation:

1. Flows are ordered as numbered. Typically the subscription-related interfaces are used before the data-related interfaces. And metadata typically are updated after subscribing to and ordering data.
2. Arrows for external interfaces are solid and internal interfaces are dotted.

Exhibit 2-1. Data Flows for QA of Data Products

Participants and Support Requirements:

Participants:

M&O Support at the GSFC, LaRC, EDC, and NSIDC DAACs for B0 and B1.
M&O Support at the MODIS and CERES / MOPITT / MISR SCFs

Communications:

Voice - As necessary.
Data - LAN used for data transfers within ECS.
IP Addresses: TBS

Equipment and Software:

Hardware: Science Data Server, Storage Management Server
Software: Planning Subsystem, Data Processing Subsystem, Product Queuing and Management - Autosys, QA Client Support, Access Control & Management, Working Storage, Data Repository, and Science processors

Test Tools:

LoadRunner for performance testing, if unable to generate a production plan to stress system resources.

Test Data:

Description / Characteristics	Source	File/script name & Location
CERES Operational Science S/W Pkg.	LaRC DAAC	
MISR Operational Science S/W Pkg.	LaRC DAAC	
MOPITT Operational Science S/W Pkg.	LaRC DAAC	
MODIS Operational Science S/W Pkg.	GSFC DAAC	
MODIS Operational Science S/W Pkg.	EDC DAAC	
MODIS Operational Science S/W Pkg.	NSIDC DAAC	

FUNCTIONAL THREAD TEST CASE

Thread Id: SFQ2

Modified: 7/28/97

Description: Verify at each DAAC that:

- 1) The science operations team can plan, schedule and execute a representative daily production run, including re-processing requests, using Autosys with dependencies.
- 2) The science operations team can conduct quality assurance (QA) checks on completed data.
- 3) The investigator team can perform remote QA from the Science Computing Facility (SCF).
- 4) The information management service (IMS) can be queried to verify proper metadata generation.
- 5) The end user notification is performed properly.
- 6) Emergency procedures during data production are exercised (e.g. When resources become unavailable, what happens to a typical production scenario).

Test Case Id: SFQ2.001

Modified: 8/25/97

Description: GSFC DAAC Production Run

This test verifies the operability of science data production at the GSFC DAAC. A production run, which is representative of a typical daily production run (one that will stress the system) using MODIS PGEs, is scheduled using AutoSys. Data dependencies are exercised. The test is successful if the product is produced or the run waits for data availability. Production reports are generated and verified. Push of appropriate MODIS data from GSFC DAAC to EDC DAAC and NSIDC DAAC is also verified. End user notification is also verified.

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using integrated MODIS PGEs, some with PGE chaining (i.e. PGEs dependent on the completion of another PGE for input data) and the execution of multiple PGEs at the same time.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether input data is available for the PGEs. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1472#B
DADS1620#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B

PGS-0325#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B
SMC-1315#B
SMC-1320#B
SMC-1325#B
SMC-1345#B
SMC-1600#B
SMC-1610#B
SMC-3350#B

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	DAAC	Verify that PGEs that are to be part of the test production plan have completed SSI&T and are available to be scheduled.	Needed PGEs have completed SSI&T and are PRs available for use in generating a candidate production plan.	Ensure that some of the PGEs to be run will perform in-line QA.		8/25/97
1.002	DAAC	Verify that required data for MODIS PGEs to be executed has been ingested, is currently archived and available for use in a production run.	Needed data has been ingested and is available.			8/21/97
2.001	DAAC	Launch the Resource Identification Screen by double-clicking the Resource Definition icon on the desktop.	Resource Identification screen is displayed			10/28/97
2.002	DAAC	Resource Identification Screen: select Computer type from the list and click on new	Computer Resource Definition Screen is displayed			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.003	DAAC	Computer Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Number of CPUs (required) Total RAM (required) Operating System (required) Disks - (list of disks defined for that site) use arrow buttons to move items to or from Associated Disks Comments - user comments (i.e. resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.004	DAAC	Disk Partition Resource Definition Screen: - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Partition Size (required) - disk partition in kilobytes Block Size (required) - block size in bytes Comments - user comments (i.e. disk resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/18/97
2.005	DAAC	Hardware Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Comments - user comments (i.e. hardware resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.006	DAAC	String Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Computers - (list of computers defined for that site) use arrow buttons to move items to or from Associated Computers Comments - user comments (i.e. computer resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97
2.007	DAAC	Launch Resource Reservation GUI by double-clicking the Resource icon on the desktop	Resource Planing screen displayed.			10/27/97
2.008	DAAC	Click on 'New' on the Resource Planning screen	Resource Edit screen displayed			10/27/97
2.009	DAAC	Enter Resource Request Identification Information: Request Name Origination Date Originator Sponsor (optional) Press [TAB] key to move from field to field.	User is able to enter Request Name and Sponsor. Origination Date and Originator are system-generated	Origination Date should be today's date and the Originator should be the User ID entering the request.		10/27/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.010	DAAC	Enter Resource Definition Information: Activity Type Priority Description Resources Intervals Press [TAB] key to move from field to field	User is able to enter information in all of the displayed fields			10/27/97
2.011	DAAC	Select Resources: Click on Resources ... button Click on selections and desired arrow. Click OK	Request Name is displayed with a pair of lists - Resources and Selected Resources. Desired resources are selected			10/27/97
2.012	DAAC	Select Intervals: Adjust selected and unselected intervals as desired. Click OK	A pair of lists is displayed - unselected intervals and selected intervals. Desired intervals are selected			10/27/97
2.013	DAAC	Enter Duration Information: Start Date Start Time Stop Time Stop Date Frequency Press [TAB] key to move from field to field	User is able to enter information in all specified fields			10/27/97
2.014	DAAC	Select Frequency ... Select appropriate frequency	User is able to select desired frequency of resource allocation			10/27/97
2.015	DAAC	Enter comments in the Comment field	User is able to enter comments			10/27/97
2.016	DAAC	Click on SAVE to save data entered	Entered data is saved.			10/27/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.017	DAAC	From the Resource Planning screen highlight the resource reservation request you want to validate and click on the Modify button. Select VALIDATED. Click on SAVE	Status field changes to 'VALIDATED' Status change is saved.			10/27/97
2.018	DAAC	From the Resource Planning screen highlight the resource reservation request you want to approve and click on the Modify button. Select APPROVED. Click on SAVE	Status field changes to 'APPROVED' Status change is saved.			10/27/97
2.019	DAAC	From the Resource Planning screen click on the Modify ... button. Select COMMIT. Click on SAVE	Status field changes to 'COMMIT' Status change is saved.	Status will change to 'COMMIT' for all previously approved requests.		10/28/97
2.020	DAAC	Select File -> Exit	Resource Reservation GUI is closed.			11/10/97
2.021	DAAC	Enter subscription for MODIS products to be generated by production plan. One subscription should be for the SCF to perform QA.	Subscriptions are entered	Will be verified by receipt of e-mail indicating product availability or by viewing e-mail log files.		8/25/97
2.022	DAAC Production Planner	Launch Planning Workbench GUI by double-clicking the Planning Workbench icon on the desktop	Planning Timeline GUI is displayed	If a production plan already exists, can skip to step 2.030.		10/31/97
2.023	DAAC Production Planner	Select File -> New	The New window appears			10/31/97
2.024	DAAC Production Planner	Enter Plan Name in the 'Plan Name' field (SFQ2), then single-click 'OK'	Name (SFQ2) is displayed in 'Plan Name' field and status is listed as 'CANDIDATE'			10/31/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.025	DAAC Production Planner	Single-click inside the 'Comment' field and enter appropriate comments (e.g. SQF2 Production Plan)	Comments are entered.			10/31/97
2.026	DAAC Production Planner	Single-click on a desired Production Request and single-click on the Scheduled/Unscheduled up and down arrows.	Highlighted Production requested are Scheduled/Unscheduled	PRs selected should include PGEs requiring output from other scheduled PGEs.		11/03/97
2.027	DAAC Production Planner	Select each Production Request and single-click Prioritize	Priority Window appears with PR priority shown			11/03/97
2.028	DAAC Production Planner	Enter new priority and single-click 'OK'	Priority is updated for selected Production Request			11/03/97
2.029	DAAC Production Planner	Select File -> Save	Production Plan is saved. Planning Subsystem lists standard, reprocessing and on-demand production requests (PR).			11/03/97
2.030	DAAC Production Scheduler	Review plan and modify production strategies if needed.	Plan to be activated meets criteria for test.			8/21/97
2.031	DAAC Production Scheduler	Select and activate appropriate plan.	Plan Activation window is displayed			11/03/97
2.032	DAAC Production Scheduler	Enter Start Time, End Date, and End Time then single-click 'OK'	Production Plan is activated. DPRs are submitted from the Planning Subsystem through the Job Management Server to the Autosys/AutoXpert Production Scheduling Tool.			11/03/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.033	DAAC Production Scheduler	Select File -> Exit to exit the Planning Workbench	Planning Workbench GUI is closed.			11/03/97
2.034	DAAC	Launch Autosys	Autosys GUI control panel available for job monitoring. All submitted DPRs are viewable, and are in the 'activated', 'running', or other appropriate job state.	Job states are defined in Autosys. Check Autosys manuals for states and interpretation.		8/21/97
3.001	DAAC	Launch Report Generator GUI and generate the following standard reports for analysis: Processing Status Report; Processing Errors Report; Actual .vs. Plan Report; Ground Event Resource Usage Report; Ground Event Resource Schedule Report; Job Report; Dependency Jobs Report; Production Plan Report	Jobs submitted via DPRs have been completed; are awaiting availability of resources or are awaiting data availability.			8/21/97
3.002	DAAC	Retrieve and print e-mail logs for time period of test	E-mail logs confirm that messages containing generated product availability notices were sent out to subscribers	Keep copy of e-mail logs and actual e-mail (if available) to be filed with test run logs.		8/21/97

Test Case Id: SFQ2.002

Modified: 8/25/97

Description: EDC DAAC Production Run

This test verifies the operability of science data production at the EDC DAAC. A production run, which is representative of a typical daily production run (one that will stress the system) using MODIS and/or ASTER PGEs, is scheduled using AutoSys. Data dependencies are exercised. The test is successful if the product is produced or the run waits for data availability. Production reports are generated and verified. End user notification is also verified.

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using integrated MODIS or ASTER PGEs, some with PGE chaining (i.e. PGEs dependent on the completion of another PGE for input data) and the execution of multiple PGEs at the same time.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether input data is available for the PGEs. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1472#B
DADS1620#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B
PGS-0325#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B
SMC-1315#B
SMC-1320#B
SMC-1325#B
SMC-1345#B
SMC-1600#B
SMC-1610#B
SMC-3350#B

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	DAAC	Verify that PGEs that are to be part of the test production plan have completed SSI&T and are available to be scheduled.	Needed PGEs have completed SSI&T and are PRs available for use in generating a candidate production plan.			8/21/97
1.002	DAAC	Verify that required data for MODIS and ASTER PGEs to be executed has been ingested, is currently archived and available for use in a production run.	Needed data has been ingested and is available.	Applicable MODIS PGEs include MOD 11, MOD 12, MOD 13, MOD 14, MOD 17, MOD 40, MOD 43, and MOD 44.		8/21/97
2.001	DAAC	Launch the Resource Identification Screen by double-clicking the Resource Definition icon on the desktop.	Resource Identification screen is displayed			10/28/97
2.002	DAAC	Resource Identification Screen: select Computer type from the list and click on new	Computer Resource Definition Screen is displayed			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.003	DAAC	Computer Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Number of CPUs (required) Total RAM (required) Operating System (required) Disks - (list of disks defined for that site) use arrow buttons to move items to or from Associated Disks Comments - user comments (i.e. resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.004	DAAC	Disk Partition Resource Definition Screen: - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Partition Size (required) - disk partition in kilobytes Block Size (required) - block size in bytes Comments - user comments (i.e. disk resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/18/97
2.005	DAAC	Hardware Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Comments - user comments (i.e. hardware resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.006	DAAC	String Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Computers - (list of computers defined for that site) use arrow buttons to move items to or from Associated Computers Comments - user comments (i.e. computer resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97
2.007	DAAC	Launch Resource Reservation GUI by double-clicking the Resource icon on the desktop	Resource Planing screen displayed.			10/27/97
2.008	DAAC	Click on 'New' on the Resource Planning screen	Resource Edit screen displayed			10/27/97
2.009	DAAC	Enter Resource Request Identification Information: Request Name Origination Date Originator Sponsor (optional) Press [TAB] key to move from field to field.	User is able to enter Request Name and Sponsor. Origination Date and Originator are system-generated	Origination Date should be today's date and the Originator should be the User ID entering the request.		10/27/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.010	DAAC	Enter Resource Definition Information: Activity Type Priority Description Resources Intervals Press [TAB] key to move from field to field	User is able to enter information in all of the displayed fields			10/27/97
2.011	DAAC	Select Resources: Click on Resources ... button Click on selections and desired arrow. Click OK	Request Name is displayed with a pair of lists - Resources and Selected Resources. Desired resources are selected			10/27/97
2.012	DAAC	Select Intervals: Adjust selected and unselected intervals as desired. Click OK	A pair of lists is displayed - unselected intervals and selected intervals. Desired intervals are selected			10/27/97
2.013	DAAC	Enter Duration Information: Start Date Start Time Stop Time Stop Date Frequency Press [TAB] key to move from field to field	User is able to enter information in all specified fields			10/27/97
2.014	DAAC	Select Frequency ... Select appropriate frequency	User is able to select desired frequency of resource allocation			10/27/97
2.015	DAAC	Enter comments in the Comment field	User is able to enter comments			10/27/97
2.016	DAAC	Click on SAVE to save data entered	Entered data is saved.			10/27/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.017	DAAC	From the Resource Planning screen highlight the resource reservation request you want to validate and click on the Modify button. Select VALIDATED. Click on SAVE	Status field changes to 'VALIDATED' Status change is saved.			10/27/97
2.018	DAAC	From the Resource Planning screen highlight the resource reservation request you want to approve and click on the Modify button. Select APPROVED. Click on SAVE	Status field changes to 'APPROVED' Status change is saved.			10/27/97
2.019	DAAC	From the Resource Planning screen click on the Modify ... button. Select COMMIT. Click on SAVE	Status field changes to 'COMMIT' Status change is saved.	Status will change to 'COMMIT' for all previously approved requests.		10/28/97
2.020	DAAC	Select File -> Exit	Resource Reservation GUI is closed.			11/10/97
2.021	DAAC	Enter subscription for MODIS and ASTER products to be generated by production plan.	Subscriptions are entered	Will be verified by receipt of e-mail indicating product availability or by viewing e-mail log files.		8/21/97
2.022	DAAC Production Planner	Launch Planning Workbench GUI by double-clicking the Planning Workbench icon on the desktop	Planning Timeline GUI is displayed	If an Acquire PGE production plan already exists, can skip to step 2.028.		11/03/97
2.023	DAAC Production Planner	Select File -> New	The New window appears			10/31/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.024	DAAC Production Planner	Enter Plan Name in the 'Plan Name' field (SFQ2-Acquire), then single-click 'OK'	Name (SFQ2-Acquire) is displayed in 'Plan Name' field and status is listed as 'CANDIDATE'	Work-around for Release B.0 testing. Skip to step2.031 for Release B.1 or if production plan already exists, skip to step 2.028.		10/31/97
2.025	DAAC Production Planner	Single-click inside the 'Comment' field and enter appropriate comments (e.g. SQF2-Acquire PGE Production Plan)	Comments are entered.			10/31/97
2.026	DAAC Production Planner	Single-click on a desired Production Requests for "Acquire PGE" to create a subscription for needed data for generation of the MOD 11, MOD 12, MOD 13, MOD 14, MOD 17, MOD 40, MOD 43, and MOD 44 products and single-click on the Scheduled/Unscheduled up and down arrows.	Highlighted Production requests are Scheduled/Unscheduled. Acquire PGE PRs scheduled for input data needed to generate MODIS products at EDC DAAC.			11/03/97
2.027	DAAC Production Planner	Select File -> Save	Production Plan is saved.			11/03/97
2.028	DAAC Production Scheduler	Select and activate production plan "SFQ-2 Acquire" or other appropriate plan.	Plan Activation window is displayed			11/10/97
2.029	DAAC Production Scheduler	Enter Start Time, End Date, and End Time then single-click 'OK'	Production Plan is activated.	DPRs are submitted from the Planning Subsystem through the Job Management Server to the Autosys/AutoXpert Production Scheduling Tool.		11/03/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.030	DAAC	Launch Autosys	Autosys GUI control panel available for job monitoring. All submitted DPRs are viewable, and are in the 'activated', 'running', or other appropriate job state. Submitted jobs execute and the necessary input data is remotely acquired from GSFC DAAC and inserted at EDC DAAC.	Job states are defined in Autosys. Check Autosys manuals for states and interpretation.		8/21/97
2.031	DAAC Production Planner	Select File -> New	The New window appears	If a Production Plan meeting test requirements already exists, skip to step 2.038.		11/03/97
2.032	DAAC Production Planner	Enter Plan Name in the 'Plan Name' field (SFQ2), then single-click 'OK'	Name (SFQ2) is displayed in 'Plan Name' field and status is listed as 'CANDIDATE'			10/31/97
2.033	DAAC Production Planner	Single-click inside the 'Comment' field and enter appropriate comments (e.g. SQF2 Production Plan)	Comments are entered.			10/31/97
2.034	DAAC Production Planner	Single-click on a desired Production Request and single-click on the Scheduled/Unscheduled up and down arrows.	Highlighted Production requested are Scheduled/Unscheduled	PRs selected should include PGEs requiring output from other scheduled PGEs.		11/03/97
2.035	DAAC Production Planner	Select each Production Request and single-click Prioritize	Priority Window appears with PR priority shown			11/03/97
2.036	DAAC Production Planner	Enter new priority and single-click 'OK'	Priority is updated for selected Production Request			11/03/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.037	DAAC Production Planner	Select File -> Save	Production Plan is saved. Planning Subsystem lists standard, reprocessing and on-demand production requests (PR).			11/03/97
2.038	DAAC Production Scheduler	Review plan and modify production strategies if needed.	Plan to be activated meets criteria for test.			8/21/97
2.039	DAAC Production Scheduler	Select and activate appropriate plan.	Plan Activation window is displayed			11/03/97
2.040	DAAC Production Scheduler	Enter Start Time, End Date, and End Time then single-click 'OK'	Production Plan is activated.	DPRs are submitted from the Planning Subsystem through the Job Management Server to the Autosys/AutoXpert Production Scheduling Tool.		11/03/97
2.041	DAAC Production Scheduler	Select File -> Exit to exit the Planning Workbench	Planning Workbench GUI closed.			11/03/97
2.042	DAAC Data Server	Generate On-Demand Processing Request (ODPR) for one or more of the ASTER products (AST 01, AST 03, AST 04, AST 05, AST 06, AST 07, AST 08, AST09, AST 13, or AST 14).	ODPR is automatically compared to various acceptance criteria and resource usage thresholds. Those that do not exceed acceptance criteria and usage thresholds generate appropriate DPRs and are submitted into the queue.	Want to submit ODPRs that meet acceptance criteria and thresholds and that which exceed acceptance criteria and thresholds		8/21/97
2.043	DAAC Data Server	Generate ODPR that meets acceptance criteria and resource thresholds	Appropriate DPRs and are submitted into the queue.	Verify using Autosys		11/03/97
2.044	DAAC Data Server	Generate ODPR that exceeds acceptance criteria and resource requirements	Planning Subsystem defers ODPR . Operations staff receives deferral notice	Print copy of deferral notice for analysis package.		8/21/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.045	DAAC Planning Subsystem	Request status information	Status is displayed.	Obtain copy of display.		8/21/97
2.046	DAAC Production Scheduler	Reset job priorities utilizing the Production Request Editor or Autosys GUI.	Job priorities reset. ODPR job(s) receive higher priority.			8/21/97
2.047	DAAC	Launch Autosys	Autosys GUI control panel available for job monitoring. All submitted DPRs are viewable, and are in the 'activated', 'running', or other appropriate job state.	Job states are defined in Autosys. Check Autosys manuals for states and interpretation.		8/21/97
3.001	DAAC	Launch Report Generator GUI and generate the following standard reports for analysis: Processing Status Report; Processing Errors Report; Actual .vs. Plan Report; Ground Event Resource Usage Report; Ground Event Resource Schedule Report; Job Report; Dependency Jobs Report; Production Plan Report	Jobs submitted via DPRs have been completed; are awaiting availability of resources or are awaiting data availability.			8/21/97
3.002	DAAC	Retrieve and print e-mail logs for time period of test	E-mail logs confirm that messages containing generated product availability notices were sent out to subscribers	Keep copy of e-mail logs and actual e-mail (if available) to be filed with test run logs.		8/21/97

Test Case Id: SFQ2.003

Modified: 8/25/97

Description: LaRC DAAC Production Run

This test verifies the operability of science data production at the LaRC DAAC. A production run, which is representative of a typical daily production run (one that will stress the system) using CERES, MISR or MOPITT PGEs, is scheduled using AutoSys. Data dependencies are exercised. The test is successful if the product is produced or the run waits for data availability. Production reports are generated and verified. End user notification is also verified.

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using integrated CERES, MISR or MOPITT PGEs, some with PGE chaining (i.e. PGEs dependent on the completion of another PGE for input data) and the execution of multiple PGEs at the same time.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether input data is available for the PGEs. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1472#B
DADS1620#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B
PGS-0325#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B
SMC-1315#B
SMC-1320#B
SMC-1325#B
SMC-1345#B
SMC-1600#B
SMC-1610#B
SMC-3350#B

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	DAAC	Verify that PGEs that are to be part of the test production plan have completed SSI&T and are available to be scheduled.	Needed PGEs have completed SSI&T and are PRs available for use in generating a candidate production plan.			8/22/97
1.002	DAAC	Verify that required data for CERES, MISR, or MOPITT PGEs to be executed has been ingested, is currently archived and available for use in a production run.	Needed data has been ingested and is available.			8/22/97
2.001	DAAC	Launch the Resource Identification Screen by double-clicking the Resource Definition icon on the desktop.	Resource Identification screen is displayed			10/28/97
2.002	DAAC	Resource Identification Screen: select Computer type from the list and click on new	Computer Resource Definition Screen is displayed			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.003	DAAC	Computer Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Number of CPUs (required) Total RAM (required) Operating System (required) Disks - (list of disks defined for that site) use arrow buttons to move items to or from Associated Disks Comments - user comments (i.e. resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.004	DAAC	Disk Partition Resource Definition Screen: - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Partition Size (required) - disk partition in kilobytes Block Size (required) - block size in bytes Comments - user comments (i.e. disk resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/18/97
2.005	DAAC	Hardware Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Comments - user comments (i.e. hardware resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.006	DAAC	String Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Computers - (list of computers defined for that site) use arrow buttons to move items to or from Associated Computers Comments - user comments (i.e. computer resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97
2.007	DAAC	Launch Resource Reservation GUI by double-clicking the Resource icon on the desktop	Resource Planing screen displayed.			10/27/97
2.008	DAAC	Click on 'New' on the Resource Planning screen	Resource Edit screen displayed			10/27/97
2.009	DAAC	Enter Resource Request Identification Information: Request Name Origination Date Originator Sponsor (optional) Press [TAB] key to move from field to field.	User is able to enter Request Name and Sponsor. Origination Date and Originator are system-generated	Origination Date should be today's date and the Originator should be the User ID entering the request.		10/27/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.010	DAAC	Enter Resource Definition Information: Activity Type Priority Description Resources Intervals Press [TAB] key to move from field to field	User is able to enter information in all of the displayed fields			10/27/97
2.011	DAAC	Select Resources: Click on Resources ... button Click on selections and desired arrow. Click OK	Request Name is displayed with a pair of lists - Resources and Selected Resources. Desired resources are selected			10/27/97
2.012	DAAC	Select Intervals: Adjust selected and unselected intervals as desired. Click OK	A pair of lists is displayed - unselected intervals and selected intervals. Desired intervals are selected			10/27/97
2.013	DAAC	Enter Duration Information: Start Date Start Time Stop Time Stop Date Frequency Press [TAB] key to move from field to field	User is able to enter information in all specified fields			10/27/97
2.014	DAAC	Select Frequency ... Select appropriate frequency	User is able to select desired frequency of resource allocation			10/27/97
2.015	DAAC	Enter comments in the Comment field	User is able to enter comments			10/27/97
2.016	DAAC	Click on SAVE to save data entered	Entered data is saved.			10/27/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.017	DAAC	From the Resource Planning screen highlight the resource reservation request you want to validate and click on the Modify button. Select VALIDATED. Click on SAVE	Status field changes to 'VALIDATED' Status change is saved.			10/27/97
2.018	DAAC	From the Resource Planning screen highlight the resource reservation request you want to approve and click on the Modify button. Select APPROVED. Click on SAVE	Status field changes to 'APPROVED' Status change is saved.			10/27/97
2.019	DAAC	From the Resource Planning screen click on the Modify ... button. Select COMMIT. Click on SAVE	Status field changes to 'COMMIT' Status change is saved.	Status will change to 'COMMIT' for all previously approved requests.		10/28/97
2.020	DAAC	Select File -> Exit	Resource Reservation GUI is closed.			11/10/97
2.021	DAAC	Enter subscription for CERES, MISR, or MOPITT products to be generated by production plan. One subscription should be for the SCF to perform QA.	Subscriptions are entered	Will be verified by receipt of e-mail indicating product availability or by viewing e-mail log files.		8/25/97
2.022	DAAC Production Planner	Launch Planning Workbench GUI by double-clicking the Planning Workbench icon on the desktop	Planning Timeline GUI is displayed	If a production plan already exists, can skip to step 2.030.		10/31/97
2.023	DAAC Production Planner	Select File -> New	The New window appears			10/31/97
2.024	DAAC Production Planner	Enter Plan Name in the 'Plan Name' field (SFQ2), then single-click 'OK'	Name (SFQ2) is displayed in 'Plan Name' field and status is listed as 'CANDIDATE'			10/31/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.025	DAAC Production Planner	Single-click inside the 'Comment' field and enter appropriate comments (e.g. SQF2 Production Plan)	Comments are entered.			10/31/97
2.026	DAAC Production Planner	Single-click on a desired Production Request and single-click on the Scheduled/Unscheduled up and down arrows.	Highlighted Production requested are Scheduled/Unscheduled	PRs selected should include PGEs requiring output from other scheduled PGEs.		11/03/97
2.027	DAAC Production Planner	Select each Production Request and single-click Prioritize	Priority Window appears with PR priority shown			11/03/97
2.028	DAAC Production Planner	Enter new priority and single-click 'OK'	Priority is updated for selected Production Request			11/03/97
2.029	DAAC Production Planner	Select File -> Save	Production Plan is saved. Planning Subsystem lists standard, reprocessing and on-demand production requests (PR).			11/03/97
2.030	DAAC Production Scheduler	Review plan and modify production strategies if needed.	Plan to be activated meets criteria for test.			8/21/97
2.031	DAAC Production Scheduler	Select and activate "SQF2 Production Plan" or other appropriate plan.	Plan Activation window is displayed			11/03/97
2.032	DAAC Production Scheduler	Enter Start Time, End Date, and End Time then single-click 'OK'	Production Plan is activated.	DPRs are submitted from the Planning Subsystem through the Job Management Server to the Autosys/AutoXpert Production Scheduling Tool.		11/03/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.033	DAAC Production Scheduler	Select File -> Exit to exit the Planning Workbench	Planning Workbench GUI is closed.			11/03/97
2.034	DAAC	Launch Autosys	Autosys GUI control panel available for job monitoring. All submitted DPRs are viewable, and are in the 'activated', 'running', or other appropriate job state.	Job states are defined in Autosys. Check Autosys manuals for states and interpretation.		8/22/97
3.001	DAAC	Launch Report Generator GUI and generate the following standard reports for analysis: Processing Status Report; Processing Errors Report; Actual .vs. Plan Report; Ground Event Resource Usage Report; Ground Event Resource Schedule Report; Job Report; Dependency Jobs Report; Production Plan Report	Jobs submitted via DPRs have been completed; are awaiting availability of resources or are awaiting data availability.			8/22/97
3.002	DAAC	Retrieve and print e-mail logs for time period of test	E-mail logs confirm that messages containing generated product availability notices were sent out to subscribers	Keep copy of e-mail logs and actual e-mail (if available) to be filed with test run logs.		8/22/97

Test Case Id: SFQ2.004

Modified: 8/25/97

Description: NSIDC DAAC Production Run

This test verifies the operability of science data production at the NSIDC DAAC. A production run, which is representative of a typical daily production run (one that will stress the system) using MODIS PGEs, is scheduled using AutoSys. Data dependencies are exercised. The test is successful if the product is produced or the run waits for data availability. Production reports are generated and verified. End user notification is also verified.

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using integrated MODIS PGEs, some with PGE chaining (i.e. PGEs dependent on the completion of another PGE for input data) and the execution of multiple PGEs at the same time.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether input data is available for the PGEs. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1472#B
DADS1620#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B
PGS-0325#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B
SMC-1315#B
SMC-1320#B
SMC-1325#B
SMC-1345#B
SMC-1600#B
SMC-1610#B
SMC-3350#B

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	DAAC	Verify that PGEs that are to be part of the test production plan have completed SSI&T and are available to be scheduled.	Needed PGEs have completed SSI&T and are PRs available for use in generating a candidate production plan.	Note: Want to generate an error here and note how Autosys handles error.		8/22/97
1.002	DAAC	Verify that required data for MODIS PGEs to be executed has been ingested, is currently archived and available for use in a production run.	Needed data has been ingested and is available.	Applicable MODIS PGEs include MOD 10, MOD 29, MOD 33, and MOD 42		8/22/97
2.001	DAAC	Launch the Resource Identification Screen by double-clicking the Resource Definition icon on the desktop.	Resource Identification screen is displayed			10/28/97
2.002	DAAC	Resource Identification Screen: select Computer type from the list and click on new	Computer Resource Definition Screen is displayed			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.003	DAAC	Computer Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Number of CPUs (required) Total RAM (required) Operating System (required) Disks - (list of disks defined for that site) use arrow buttons to move items to or from Associated Disks Comments - user comments (i.e. resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.004	DAAC	Disk Partition Resource Definition Screen: - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Partition Size (required) - disk partition in kilobytes Block Size (required) - block size in bytes Comments - user comments (i.e. disk resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/18/97
2.005	DAAC	Hardware Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Comments - user comments (i.e. hardware resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.006	DAAC	String Resource Definition Screen - fill in the displayed fields: Resource Name - (user defined) SFQ2 (required) Activity - (system generated) modify by clicking on the bar in the activity field Computers - (list of computers defined for that site) use arrow buttons to move items to or from Associated Computers Comments - user comments (i.e. computer resources for SFQ2 qual test) Click on Save to save and exit screen	User is able to perform the functions as specified.			10/28/97
2.007	DAAC	Launch Resource Reservation GUI by double-clicking the Resource icon on the desktop	Resource Planing screen displayed.			10/27/97
2.008	DAAC	Click on 'New' on the Resource Planning screen	Resource Edit screen displayed			10/27/97
2.009	DAAC	Enter Resource Request Identification Information: Request Name Origination Date Originator Sponsor (optional) Press [TAB] key to move from field to field.	User is able to enter Request Name and Sponsor. Origination Date and Originator are system-generated	Origination Date should be today's date and the Originator should be the User ID entering the request.		10/27/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.010	DAAC	Enter Resource Definition Information: Activity Type Priority Description Resources Intervals Press [TAB] key to move from field to field	User is able to enter information in all of the displayed fields			10/27/97
2.011	DAAC	Select Resources: Click on Resources ... button Click on selections and desired arrow. Click OK	Request Name is displayed with a pair of lists - Resources and Selected Resources. Desired resources are selected			10/27/97
2.012	DAAC	Select Intervals: Adjust selected and unselected intervals as desired. Click OK	A pair of lists is displayed - unselected intervals and selected intervals. Desired intervals are selected			10/27/97
2.013	DAAC	Enter Duration Information: Start Date Start Time Stop Time Stop Date Frequency Press [TAB] key to move from field to field	User is able to enter information in all specified fields			10/27/97
2.014	DAAC	Select Frequency ... Select appropriate frequency	User is able to select desired frequency of resource allocation			10/27/97
2.015	DAAC	Enter comments in the Comment field	User is able to enter comments			10/27/97
2.016	DAAC	Click on SAVE to save data entered	Entered data is saved.			10/27/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.017	DAAC	From the Resource Planning screen highlight the resource reservation request you want to validate and click on the Modify button. Select VALIDATED. Click on SAVE	Status field changes to 'VALIDATED' Status change is saved.			10/27/97
2.018	DAAC	From the Resource Planning screen highlight the resource reservation request you want to approve and click on the Modify button. Select APPROVED. Click on SAVE	Status field changes to 'APPROVED' Status change is saved.			10/27/97
2.019	DAAC	From the Resource Planning screen click on the Modify ... button. Select COMMIT. Click on SAVE	Status field changes to 'COMMIT' Status change is saved.	Status will change to 'COMMIT' for all previously approved requests.		10/28/97
2.020	DAAC	Select File -> Exit	Resource Reservation GUI is closed.			11/10/97
2.021	DAAC	Enter subscription for MODIS products to be generated by production plan.	Subscriptions are entered	Will be verified by receipt of e-mail indicating product availability or by viewing e-mail log files.		8/22/97
2.022	DAAC Production Planner	Launch Planning Workbench GUI by double-clicking the Planning Workbench icon on the desktop	Planning Timeline GUI is displayed	If an Acquire PGE production plan already exists, can skip to step 2.028. Work-around for Release B.0 testing. Skip to step 2.031 for Release B.1.		11/03/97
2.023	DAAC Production Planner	Select File -> New	The New window appears			10/31/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.024	DAAC Production Planner	Enter Plan Name in the 'Plan Name' field (SFQ2-Acquire), then single-click 'OK'	Name (SFQ2-Acquire) is displayed in 'Plan Name' field and status is listed as 'CANDIDATE'			10/31/97
2.025	DAAC Production Planner	Single-click inside the 'Comment' field and enter appropriate comments (e.g. SQF2-Acquire PGE Production Plan)	Comments are entered.			10/31/97
2.026	DAAC Production Planner	Single-click on a desired Production Requests for "Acquire PGE" to create a subscription for needed data for generation of the MOD 10, MOD 29, MOD 33, and MOD 42 products. and single-click on the Scheduled/Unscheduled up and down arrows.	Highlighted Production requests are Scheduled/Unscheduled. Acquire PGE PRs scheduled for input data needed to generate MODIS products at EDC DAAC.			11/03/97
2.027	DAAC Production Planner	Select File -> Save	Production Plan is saved.			11/03/97
2.028	DAAC Production Scheduler	Select and activate production plan "SFQ-2 Acquire" or other appropriate plan.	Plan Activation window is displayed			11/03/97
2.029	DAAC Production Scheduler	Enter Start Time, End Date, and End Time then single-click 'OK'	Production Plan is activated.	DPRs are submitted from the Planning Subsystem through the Job Management Server to the Autosys/AutoXpert Production Scheduling Tool.		11/03/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.030	DAAC	Launch Autosys	Autosys GUI control panel available for job monitoring. All submitted DPRs are viewable, and are in the 'activated', 'running', or other appropriate job state. Submitted jobs execute and the necessary input data is remotely acquired from GSFC DAAC and inserted at EDC DAAC.	Job states are defined in Autosys. Check Autosys manuals for states and interpretation.		8/22/97
2.031	DAAC Production Planner	Select File -> New	The New window appears	If a Production Plan meeting test requirements already exists, skip to step 2.039.		11/03/97
2.032	DAAC Production Planner	Enter Plan Name in the 'Plan Name' field (SFQ2), then single-click 'OK'	Name (SFQ2) is displayed in 'Plan Name' field and status is listed as 'CANDIDATE'			10/31/97
2.033	DAAC Production Planner	Single-click inside the 'Comment' field and enter appropriate comments (e.g. SQF2 Production Plan)	Comments are entered.			10/31/97
2.034	DAAC Production Planner	Single-click on a desired Production Request and single-click on the Scheduled/Unscheduled up and down arrows.	Highlighted Production requested are Scheduled/Unscheduled	PRs selected should include PGEs requiring output from other scheduled PGEs. If production plan already exists, skip to step 2.039.		11/03/97
2.035	DAAC Production Planner	Select each Production Request and single-click Prioritize	Priority Window appears with PR priority shown			11/03/97
2.036	DAAC Production Planner	Enter new priority and single-click 'OK'	Priority is updated for selected Production Request			11/03/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.037	DAAC Production Planner	Select File -> Save	Production Plan is saved. Planning Subsystem lists standard, reprocessing and on-demand production requests (PR).			11/03/97
2.038	DAAC Production Scheduler	Review plan and modify production strategies if needed.	Plan to be activated meets criteria for test.			8/22/97
2.039	DAAC Production Scheduler	Select and activate appropriate plan.	Plan Activation window is displayed			11/03/97
2.040	DAAC Production Scheduler	Enter Start Time, End Date, and End Time then single-click 'OK'	Production Plan is activated.	DPRs are submitted from the Planning Subsystem through the Job Management Server to the Autosys/AutoXpert Production Scheduling Tool.		11/03/97
2.041	DAAC Production Scheduler	Select File -> Exit to exit the Planning Workbench	Planning Workbench GUI closed.			11/03/97
2.042	DAAC	Launch Autosys	Autosys GUI control panel available for job monitoring. All submitted DPRs are viewable, and are in the 'activated', 'running', or other appropriate job state.	Job states are defined in Autosys. Check Autosys manuals for states and interpretation.		8/22/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
3.001	DAAC	Launch Report Generator GUI and generate the following standard reports for analysis: Processing Status Report; Processing Errors Report; Actual .vs. Plan Report; Ground Event Resource Usage Report; Ground Event Resource Schedule Report; Job Report; Dependency Jobs Report; Production Plan Report	Jobs submitted via DPRs have been completed; are awaiting availability of resources or are awaiting data availability.			8/22/97
3.002	DAAC	Retrieve and print e-mail logs for time period of test	E-mail logs confirm that messages containing generated product availability notices were sent out to subscribers	Keep copy of e-mail logs and actual e-mail (if available) to be filed with test run logs.		8/22/97

Test Case Id: SFQ2.005

Modified: 8/26/97

Description: Production Run w/ InterDAAC Dependencies

This test verifies the operability of science data production using PGEs with InterDAAC dependencies. This test is anticipated to be run on the EDC DAAC, however the NSIDC DAAC is also an acceptable site for this test. A run using MODIS PGEs (where a PGE is NOT already on the system), is scheduled using AutoSys. InterDAAC data dependencies are exercised. Dynamic acquire and run is verified. The test is successful if the product is produced. Production reports are generated and verified.

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using a MODIS PGE that is not already on the system to test dynamic acquire and run.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T on another DAAC but not on the DAAC where the test is to be run. Also, whether input data is available for the dynamically acquired PGE. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1472#B
DADS1620#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B
PGS-0325#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B
SMC-1315#B
SMC-1320#B
SMC-1325#B
SMC-1345#B
SMC-1600#B
SMC-1610#B
SMC-3350#B

This test involves the process of modifications of the production plan at the various DAACs via telcon and e-mail to produce a production plan such that the data needed by the EDC and NSIDC DAACs to produce the subsequent MODIS products will be available in a timely manner to support such production. This will test the abilities of each DAAC involved to publish its production plan for review and comment by the other DAACs and the SMC.

Test Case Id: SFQ2.006

Modified: 8/26/97

Description: Science Operations Team / SCF QA (GSFC)

This test verifies the QA process involved with science data production. The products produced are QA'd at the GSFC DAAC and the responsible MODIS SCF. The QA'd product metadata update is verified.

Objectives:

Configuration: Test case SFQ2.001 produces MODIS products.

Data Inputs: MODIS data granules produced at the GSFC DAAC from SFQ2.001.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether output data is available from those PGEs as a result of the successful completion of test case SFQ2.001

Verified Requirements:

DADS0010#B

DADS0020#B

DADS2440#B

IMS-0350#B

IMS-0450#B

IMS-1520#B

IMS-1645#B

PGS-1050#B

PGS-1060#B

PGS-1090#B

PGS-1100#B

PGS-1110#B

PGS-1120#B

PGS-1130#B

PGS-1140#B

PGS-1175#B

PGS-1180#B

PGS-1200#B

SCF-0200#B

SCF-0210#B

SCF-0220#B

SCF-0230#B

SCF-0240#B

SCF-0250#B

SDPS0050#B

SDPS0091#B

SDPS0130#B

SMC-1300#B

SMC-3345#B

SMC-3350#B

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	DAAC	Verify that one or more of the PGEs run in Test Case SFQ2.001 was set to perform in-line or automated QA. Also verify that some subscriptions were entered for SCF to receive notice of product availability for QA analysis.	Several of the PGEs run in Test Case SFQ2.001 performed QA, and some subscriptions were entered to notify SCF of data product availability.	If this is not the case, rerun test SFQ2.001 with one or more PGEs set to perform automated QA.		8/26/97
2.001	DAAC	Set appropriate environmental variables to support ISQL access to the database to verify QA metadata update.	Tester is able to utilize ISQL to query the database for QA metadata information.			8/26/97
2.002	DAAC	Utilizing ISQL, verify that the metadata for the PGEs where automated QA was performed contains the appropriate results	Returned data indicates that the automated QA was performed and the results are recorded appropriately.	Obtain printout of ISQL query results for filing with the test plan. Also record the SQL statements used to access and retrieve QA metadata.		8/26/97
2.003	SCF	Enter data subscription request via email for MODIS PGE products that were not requested via Test Case SFQ2.001	Email sent to DAAC	Refer to 505-41-33 section 5.8 for format and content of e-mail message to DAAC		11/20/97
2.004	DAAC	Email from SCF received.	DAAC sends out via email a QA data subscription request acknowledgment indicating 'acceptance'	Obtain printout of email from SCF for filing with test package. Refer to 505-41-33 section 5.8 for format and content of e-mail message		11/20/97

2.005	SCF	Email from DAAC received.	Email from DAAC contains QA subscription request acknowledgment. Acknowledgment indicates subscription request 'accepted'	Obtain printout of email from DAAC for filing with test package. Refer to 505-41-33 section 5.8 for format and content of e-mail message		11/20/97
2.006	DAAC	DAAC sends via automated email QA data subscription event notification.	Notification includes notification text and the requested granule's universal reference (UR)	Verify via email logs and obtain printout for inclusion in test package		8/26/97
2.007	SCF	Email from DAAC received.	Notification includes notification text and the requested granule's universal reference (UR)	Obtain printout of email from DAAC for filing with test package. Refer to 505-41-33 section 5.8 for format and content of e-mail message		11/20/97
2.008	DAAC	DAAC sends via automated email a Distribution Notice for Data to QA	Automated email sent to SCF	Verify via email logs and obtain printout for inclusion in test package.		8/26/97
2.009	SCF	Email from DAAC received.	Distribution notice contains location of granule to be ftp'd by SCF	Obtain printout of email from DAAC for filing with test package. Refer to 505-41-33 section 5.8 for format and content of e-mail message		11/20/97
2.010	SCF	Perform ftp 'pull' from location provided by distribution notice to retrieve MODIS data products for QA analysis	MODIS data products received from DAAC for SCF QA analysis			8/26/97

2.011	SCF	Using a Web Browser, load appropriate WWW page to submit QA results to DAAC	WWW page is loaded and allows SCF personnel to submit results of QA analysis to DAAC for metadata update.	Obtain printout of WWW QA results submitted for comparison to metadata updated at DAAC. Also keep printout for test files.		8/26/97
2.012	SCF	Submit QA results to DAAC via WWW page.	WWW page indicates results submitted to DAAC with no apparent errors.			8/26/97
2.013	DAAC	DAAC receives submission from SCF.	QA metadata is updated using information provided via SCF WWW submission.			8/26/97
2.014	DAAC Science Data Specialist	Invoke the QA Monitor GUI	QA Monitor GUI is invoked. QRU Data Tab is already selected.			11/20/97
2.015	DAAC Science Data Specialist	Select appropriate data type from data types window	Data type is highlighted			11/20/97
2.016	DAAC Science Data Specialist	Enter begin and end search dates.	Dates are entered	Enter approximate date and time that data was produced		11/20/97
2.017	DAAC Science Data Specialist	Click on 'Query' button	Query is sent to the Science Data Server for metadata for granules of the selected data type matching the query parameters			11/20/97
2.018	DAAC Science Data Specialist	Highlight the <metadata name> of the data granule to be updated and select the 'Update ' button	Selected <metadata name> is highlighted and the metadata update window is displayed			11/20/97
2.019	DAAC Science Data Specialist	Highlight the <metadata field name> line	The line is highlighted			11/20/97

2.020	DAAC Science Data Specialist	Select oper metadata field and change value. Update the explanation field.	Values are updated in GUI.			11/20/97
2.021	DAAC Science Data Specialist	Select SCF quality field and change value. Update the explanation field.	Values are updated in GUI.			11/20/97
2.022	DAAC Science Data Specialist	Click on OK button	Updated metadata is stored to the SDSVR.			11/20/97
2.023	DAAC Science Data Specialist	Close the QA Monitor GUI by selecting the file -> exit	QA Monitor GUI closed.			11/20/97
2.024	DAAC Science Data Specialist	Repeat steps 2.014 through 2.017 to retrieve quality data for the granules updated in steps 2.018 through 2.021	The values reflect the updates previously made.			11/20/97
2.026	DAAC Science Data Specialist	Close the QA Monitor GUI by selecting the file -> exit	QA Monitor GUI closed.			11/20/97
2.027	DAAC	Utilizing ISQL, verify that the metadata for the PGEs where automated QA was performed contains the appropriate results and that the SCF QA results are also recorded	Returned data indicates that the automated QA was performed and the results are recorded appropriately. Returned data also indicates that the SCF QA was performed and the results are recorded appropriately.	Obtain printout of ISQL query results for filing with the test plan. Also record the SQL statements used to access and retrieve QA metadata.		8/26/97
3.001	DAAC	Obtain printout of email logs, emails as appropriate, and database transaction logs (?) to support test results	All needed information to support test results is obtained			8/26/97

Test Case Id: SFQ2.007

Modified: 8/26/97

Description: Science Operations Team / SCF QA (LaRC)

This test verifies the QA process involved with science data production. The products produced are QA'd at the LaRC DAAC and the responsible CERES / MOPITT / MISR SCF. The QA'd product metadata update is verified.

Objectives:

Configuration: Test case SFQ2.003 produces CERES / MOPITT / MISR products.

Data Inputs: CERES / MOPITT / MISR data granules produced at the LaRC DAAC from SFQ2.003.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether output data is available from those PGEs as a result of the successful completion of test case SFQ2.003

Verified Requirements:

DADS0010#B

DADS0020#B

DADS2440#B

IMS-0350#B

IMS-0450#B

IMS-1520#B

IMS-1645#B

PGS-1050#B

PGS-1060#B

PGS-1090#B

PGS-1100#B

PGS-1110#B

PGS-1120#B

PGS-1130#B

PGS-1140#B

PGS-1175#B

PGS-1180#B

PGS-1200#B

SCF-0200#B

SCF-0210#B

SCF-0220#B

SCF-0230#B

SCF-0240#B

SCF-0250#B

SDPS0050#B

SDPS0091#B

SDPS0130#B

SMC-1300#B

SMC-3345#B

SMC-3350#B

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	DAAC	Verify that one or more of the PGEs run in Test Case SFQ2.003 was set to perform in-line or automated QA. Also verify that some subscriptions were entered for SCF to receive notice of product availability for QA analysis.	Several of the PGEs run in Test Case SFQ2.003 performed QA, and some subscriptions were entered to notify SCF of data product availability.	If this is not the case, rerun test SFQ2.003 with one or more PGEs set to perform automated QA.		8/26/97
2.001	DAAC	Set appropriate environmental variables to support ISQL access to the database to verify QA metadata update.	Tester is able to utilize ISQL to query the database for QA metadata information.			8/26/97
2.002	DAAC	Utilizing ISQL, verify that the metadata for the PGEs where automated QA was performed contains the appropriate results	Returned data indicates that the automated QA was performed and the results are recorded appropriately.	Obtain printout of ISQL query results for filing with the test plan. Also record the SQL statements used to access and retrieve QA metadata.		8/26/97
2.003	SCF	Enter data subscription request via email for CERES / MOPITT / MISR PGE products that were not requested via Test Case SFQ2.001	Email sent to DAAC			8/26/97
2.004	DAAC	Email from SCF received.	DAAC sends out via email a QA data subscription request acknowledgment indicating 'acceptance'	Obtain printout of email from SCF for filing with test package. Refer to 505-41-33 section 5.8 for format and content of e-mail message		11/20/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.005	SCF	Email from DAAC received.	Email from DAAC contains QA subscription request acknowledgment. Acknowledgment indicates subscription request 'accepted'	Obtain printout of email from DAAC for filing with test package. Refer to 505-41-33 section 5.8 for format and content of e-mail message		11/20/97
2.006	DAAC	DAAC sends via automated email QA data subscription event notification.	Notification includes notification text and the requested granule's universal reference (UR)	Verify via email logs and obtain printout for inclusion in test package		8/26/97
2.007	SCF	Email from DAAC received.	Notification includes notification text and the requested granule's universal reference (UR)	Obtain printout of email from DAAC for filing with test package. Refer to 505-41-33 section 5.8 for format and content of e-mail message		11/20/97
2.008	DAAC	DAAC sends via automated email a Distribution Notice for Data to QA	Automated email sent to SCF	Verify via email logs and obtain printout for inclusion in test package.		8/26/97
2.009	SCF	Email from DAAC received.	Distribution notice contains location of granule to be ftp'd by SCF	Obtain printout of email from DAAC for filing with test package. Refer to 505-41-33 section 5.8 for format and content of e-mail message		11/20/97
2.010	SCF	Perform ftp 'pull' from location provided by distribution notice to retrieve CERES / MOPITT / MISR data products for QA analysis	CERES / MOPITT / MISR data products received from DAAC for SCF QA analysis			8/26/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.011	SCF	Using a Web Browser, load appropriate WWW page to submit QA results to DAAC	WWW page is loaded and allows SCF personnel to submit results of QA analysis to DAAC for metadata update.	Obtain printout of WWW QA results submitted for comparison to metadata updated at DAAC. Also keep printout for test files.		8/26/97
2.012	SCF	Submit QA results to DAAC via WWW page.	WWW page indicates results submitted to DAAC with no apparent errors.			8/26/97
2.013	DAAC	DAAC receives submission from SCF.	QA metadata is updated using information provided via SCF WWW submission.			8/26/97
2.014	DAAC Science Data Specialist	Invoke the QA Monitor GUI	QA Monitor GUI is invoked. QRU Data Tab is already selected.			11/20/97
2.015	DAAC Science Data Specialist	Select appropriate data type from data types window	Data type is highlighted			11/20/97
2.016	DAAC Science Data Specialist	Enter begin and end search dates.	Dates are entered	Enter approximate date and time that data was produced		11/20/97
2.017	DAAC Science Data Specialist	Click on 'Query' button	Query is sent to the Science Data Server for metadata for granules of the selected data type matching the query parameters			11/20/97
2.018	DAAC Science Data Specialist	Highlight the <metadata name> of the data granule to be updated and select the 'Update ' button	Selected <metadata name> is highlighted and the metadata update window is displayed			11/20/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.019	DAAC Science Data Specialist	Highlight the <metadata field name> line	The line is highlighted			11/20/97
2.020	DAAC Science Data Specialist	Select oper metadata field and change value. Update the explanation field.	Values are updated in GUI.			11/20/97
2.021	DAAC Science Data Specialist	Select SCF quality field and change value. Update the explanation field.	Values are updated in GUI.			11/20/97
2.022	DAAC Science Data Specialist	Click on OK button	Updated metadata is stored to the SDSVR.			11/20/97
2.023	DAAC Science Data Specialist	Close the QA Monitor GUI by selecting the file -> exit	QA Monitor GUI closed.			11/20/97
2.024	DAAC Science Data Specialist	Repeat steps 2.014 through 2.017 to retrieve quality data for the granules updated in steps 2.018 through 2.021	The values reflect the updates previously made.			11/20/97
2.025	DAAC Science Data Specialist	Close the QA Monitor GUI by selecting the file -> exit	QA Monitor GUI closed.			11/20/97

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.026	DAAC	Utilizing ISQL, verify that the metadata for the PGEs where automated QA was performed contains the appropriate results and that the SCF QA results are also recorded	Returned data indicates that the automated QA was performed and the results are recorded appropriately. Returned data also indicates that the SCF QA was performed and the results are recorded appropriately.	Obtain printout of ISQL query results for filing with the test plan. Also record the SQL statements used to access and retrieve QA metadata.		8/26/97
3.001	DAAC	Obtain printout of email logs, emails as appropriate, and database transaction logs (?) to support test results	All needed information to support test results is obtained			8/26/97

Test Case Id: SFQ2.008

Modified: 8/25/97

Description: Emergency / Priority Procedures (GSFC)

This test verifies the ability of the GSFC DAAC to implement appropriate actions in response to various emergency / priority situations. These situations include but are not limited to, 1) required input data unavailable (data unreadable due to disk hardware failure, data non-existent at the present time, etc.), 2) needed hardware resources unavailable (device failure, device not available for allocation, etc.), 3) peak loading of system resources, 4) systems maintenance, 5) priority job directives.

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using integrated MODIS PGEs, some with PGE chaining (i.e. PGEs dependent on the completion of another PGE for input data) and the execution of multiple PGEs at the same time.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether input data is available for the PGEs. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1300#B
DADS1472#B
DADS1610#B
DADS1620#B
DADS2000#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B
PGS-0320#B
PGS-0325#B
PGS-0330#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B
SMC-1315#B

SMC-1320#B
SMC-1325#B
SMC-1345#B
SMC-1360#B
SMC-1600#B
SMC-1610#B
SMC-3350#B
SMC-3385#B
SMC-3390#B

Test Case Id: SFQ2.009

Modified: 8/25/97

Description: Emergency / Priority Procedures (EDC)

This test verifies the ability of the EDC DAAC to implement appropriate actions in response to various emergency / priority situations. These situations include but are not limited to, 1) required input data unavailable (data unreadable due to disk hardware failure, data non-existent at the present time, etc.), 2) needed hardware resources unavailable (device failure, device not available for allocation, etc.), 3) peak loading of system resources, 4) systems maintenance, 5) priority job directives

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using integrated MODIS or ASTER PGEs, some with PGE chaining (i.e. PGEs dependent on the completion of another PGE for input data) and the execution of multiple PGEs at the same time.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether input data is available for the PGEs. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1300#B
DADS1472#B
DADS1610#B
DADS1620#B
DADS2000#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B
PGS-0320#B
PGS-0325#B
PGS-0330#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B
SMC-1315#B
SMC-1320#B

SMC-1325#B
SMC-1345#B
SMC-1360#B
SMC-1600#B
SMC-1610#B
SMC-3350#B
SMC-3385#B
SMC-3390#B

Test Case Id: SFQ2.010

Modified: 8/25/97

Description: Emergency / Priority Procedures (LaRC)

This test verifies the ability of the LaRC DAAC to implement appropriate actions in response to various emergency / priority situations. These situations include but are not limited to, 1) required input data unavailable (data unreadable due to disk hardware failure, data non-existent at the present time, etc.), 2) needed hardware resources unavailable (device failure, device not available for allocation, etc.), 3) peak loading of system resources, 4) systems maintenance, 5) priority job directives.

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using integrated CERES, MISR or MOPITT PGEs, some with PGE chaining (i.e. PGEs dependent on the completion of another PGE for input data) and the execution of multiple PGEs at the same time.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether input data is available for the PGEs. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1300#B
DADS1472#B
DADS1610#B
DADS1620#B
DADS2000#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B
PGS-0320#B
PGS-0325#B
PGS-0330#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B

SMC-1315#B
SMC-1320#B
SMC-1325#B
SMC-1345#B
SMC-1360#B
SMC-1600#B
SMC-1610#B
SMC-3350#B
SMC-3385#B
SMC-3390#B

Test Case Id: SFQ2.011

Modified: 8/25/97

Description: Emergency / Priority Procedures (NSIDC)

This test verifies the ability of the NSIDC DAAC to implement appropriate actions in response to various emergency / priority situations. These situations include but are not limited to, 1) required input data unavailable (data unreadable due to disk hardware failure, data non-existent at the present time, etc.), 2) needed hardware resources unavailable (device failure, device not available for allocation, etc.), 3) peak loading of system resources, 4) systems maintenance, 5) priority job directives.

Objectives:

Configuration: Test thread SFQ1 has completed execution (needed input files if any, ingested for PGEs to be run).

Data Inputs: Production plan using integrated MODIS PGEs, some with PGE chaining (i.e. PGEs dependent on the completion of another PGE for input data) and the execution of multiple PGEs at the same time.

Methods for Results Analysis:

Assumptions/Constraints: Need to know which PGEs have successfully undergone SSI&T and whether input data is available for the PGEs. This information will be used to direct the development of a production plan that meets the test criteria.

Verified Requirements:

DADS1300#B
DADS1472#B
DADS1610#B
DADS1620#B
DADS2000#B
DADS2010#B
DADS2070#B
DADS2100#B
DADS2110#B
DADS2120#B
DADS2220#B
IMS-1645#B
PGS-0165#B
PGS-0170#B
PGS-0180#B
PGS-0250#B
PGS-0270#B
PGS-0320#B
PGS-0325#B
PGS-0330#B
SDPS0015#B
SDPS0016#B
SDPS0130#B
SMC-1300#B
SMC-1315#B
SMC-1320#B
SMC-1325#B
SMC-1345#B
SMC-1360#B
SMC-1600#B
SMC-1610#B

SMC-3350#B
SMC-3385#B
SMC-3390#B

Appendix A. Requirements to Test Case Mapping

Requirement	Description	Test Case(s)
DADS0010	Each DADS shall receive updated metadata for products that have been QA'd	SFQ2.006 SFQ2.007
DADS0020	Each DADS shall, upon receipt of updated metadata for products which have been QA'd, store the metadata in its inventory.	SFQ2.006 SFQ2.007
DADS0120	Each DADS shall receive from the PGS, at a minimum, the following: a. L1-4 products b. (Deleted) c. Metadata d. Calibration e. Algorithms f. Schedule g. Status	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005
DADS1300	Each DADS shall display all faults to the system operators.	SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS1472	Each DADS shall contain the appropriate capacity to respond to contingencies, scheduling problems, and peak loads.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS1610	The FSMS shall provide for continued performance, albeit in a degraded mode, when a device (e.g., disk or cartridge drive, operator's console) fails.	SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS1620	At each DADS tools shall be available for operations/systems/maintenance personnel to monitor performance, carry out maintenance, and alter operating parameters.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS2000	Each DADS shall receive from the SMC scheduling directives in response to emergency situations.	SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS2010	Each DADS shall receive from the SMC schedule adjudication directives.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011

Requirement	Description	Test Case(s)
DADS2070	Each DADS shall interact with EDOS, and SMC to resolve schedule conflicts.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS2100	Each DADS shall receive time windows and priorities requested by the user for incorporation into and modification of its schedule.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS2110	The DADS shall provide scheduling information to the SMC.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS2120	The DADS shall have access to the system wide scheduling information. Such information includes, at a minimum, ESDIS Policies and Procedures regarding instrument and ground event scheduling, other element plans and schedules, element allocations of ground event functions and capabilities, product thread information, and scheduling directives for testing, maintenance, and emergency situations.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
DADS2220	Each DADS shall provide tools for manually overriding any of its schedules with other elements.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011

Requirement	Description	Test Case(s)
DADS2330	Each DADS shall send to the PGS, at a minimum, the following: a. Production data (L0) received from EDOS b. L0-L4 c. (Deleted) d. Metadata e. Ancillary data f. Calibration data g. Algorithms h. Schedules i. Status j. Spacecraft and instrument logs k. Special data sets l. Non-EOS science data from ADCs/ODCs	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005
DADS2340	Each DADS shall send to remote DAACs, at a minimum, the following: a. L0-L4 b. Metadata c. Ancillary data d. Calibration data e. Correlative data f. Documents g. Algorithms h. Spacecraft and instrument logs	SFQ2.001
DADS2440	Each DADS shall distribute data under a multi-level priority system. For example: a. Expedited data b. QA data c. Data products requested by standing order d. Data products requested retrospectively	SFQ2.006 SFQ2.007
IMS-0100	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.006 SFQ2.007 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
IMS-0350	The IMS shall provide the capability for authorized personnel to add, delete, or modify ECS metadata entries, individually or in groups.	SFQ2.006 SFQ2.007
IMS-0450	The IMS shall accept and validate new and updated metadata for all ECS archive data which has been ingested at the DADS.	SFQ2.006 SFQ2.007
IMS-1520	The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: a. QA/Validation of products generated by the PGS b. Algorithm development c. Calibration functions, parameter verification, and anomaly detection d. View subsetted, subsampled, and summarized data whenever associated inventory information is displayed.	SFQ2.006 SFQ2.007

Requirement	Description	Test Case(s)
IMS-1645	The IMS shall accept from the users and output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment b. Schedule performance assessment c. Evaluation of quality of ECS service	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.006 SFQ2.007 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0165	The PGS shall accept priority processing requests from the IMS.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0170	The PGS shall receive priority assignments, schedule conflict resolutions, and other operational directives from the SMC.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0180	The PGS shall receive a notice from DADS when data that it has received is available.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0250	The PGS shall schedule product generation when all inputs required to generate a Standard Product for which there is a current order (from IMS) are available. Entries in the schedule shall contain, at a minimum: a. The product to be generated b. The specific algorithm(s) and calibration coefficients to be used c. The specific data sets needed and their sizes d. Priorities and deadlines that apply to the order for the product	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011

Requirement	Description	Test Case(s)
PGS-0270	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0320	The PGS shall display detected faults to the system operators.	SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0325	The PGS shall provide the SMC with scheduling and status information.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0330	The PGS shall report detected processing system faults to the SMC.	SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0500	The PGS shall have the capability to generate Level 1 through 4 Standard Products using validated algorithms and calibration coefficients provided by the scientists.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0510	The PGS shall have the capability to generate metadata (see Appendix C) according to the algorithms provided by the scientists and associate this metadata with each Standard Product generated.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-0560	The PGS shall maintain copies of generated products to be used as inputs to other scheduled products for processing efficiency.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
PGS-1050	The PGS shall provide the capability to perform both automatic and manual QA of generated products.	SFQ2.006 SFQ2.007

Requirement	Description	Test Case(s)
PGS-1060	The PGS shall have the capability to perform automatic QA of generated products utilizing algorithms provided by the scientists	SFQ2.006 SFQ2.007
PGS-1090	The PGS shall have the capability to provide the data product quality staff with the algorithms, calibration coefficient tables, input data sets, or other information related to product processing for the purpose of reviewing and analyzing the quality of production.	SFQ2.006 SFQ2.007
PGS-1100	The PGS shall have the capability to accept product quality data input	SFQ2.006 SFQ2.007
PGS-1110	The PGS shall have the capability to associate data quality with a generated product.	SFQ2.006 SFQ2.007
PGS-1120	The PGS shall send the DADS updated metadata provided by the data product quality staff relating to product QA review. This QA review metadata shall contain the following information at a minimum. a. Product ID b. QA Approval field c. Other metadata	SFQ2.006 SFQ2.007
PGS-1130	The PGS shall receive product QA from the SCF which shall describe the results of the scientist's product quality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions	SFQ2.006 SFQ2.007
PGS-1140	The PGS shall have the capability to provide the data product quality staff with the Product QA data from the SCF.	SFQ2.006 SFQ2.007
PGS-1175	The PGS shall maintain a list of products requiring QA by SCF or the PGS.	SFQ2.006 SFQ2.007
PGS-1180	The PGS shall have the capability to update the processing status of a given product as a result of a QA timeout	SFQ2.006 SFQ2.007
PGS-1200	The PGS shall have the capability to generate a data quality assessment report including a description of the quality of each processed product as well as the quality of each of the product's input data sets.	SFQ2.006 SFQ2.007
SCF-0200	The ECS shall have the capability to receive from the SCF a QA Notification Specification. This specification, submitted by the scientist at the SCF, describes the conditions under which data should be forwarded to the SCF for QA.	SFQ2.006 SFQ2.007
SCF-0210	The ECS shall have the capability to send a Data Quality Request Notification to the SCF. This notification is sent when QA notification criteria are met during routine ECS processing. The notification states the data product and the time by which a notification, and optionally data, must be evaluated and returned to the ECS for inclusion as an update to the product metadata.	SFQ2.006 SFQ2.007
SCF-0220	The ECS shall have the capability to receive from the SCF a Request for Data to QA. This request may be a standing request specified in the QA Notification Specification and may include the data product specified in the Data Quality Request Notification, or other data required by the scientist to QA the data product.	SFQ2.006 SFQ2.007
SCF-0230	The ECS shall have the capability to send Data Delivered for QA to the SCF. This data includes the data requested by the scientist needed for the QA of data products.	SFQ2.006 SFQ2.007

Requirement	Description	Test Case(s)
SCF-0240	The ECS shall have the capability to receive an On Time QA from the SCF. This shall consist of the science QA codes describing the results of product QA and any further instructions to the ECS. The ECS shall accept the On Time QA when it is received within the time-out period specified in the Data Quality Request Notification. ECS shall accept post-time-out QA updates as Metadata Updates as specified by Requirement SCF-0250.	SFQ2.006 SFQ2.007
SCF-0250	The ECS shall have the capability to receive Metadata Updates from the SCF. These shall include the science QA codes and optionally a report describing the results of product QA and any further instructions to the ECS. The ECS shall only accept Metadata Updates when they are received after the time allotment specified in the Data Quality Request Notification.	SFQ2.006 SFQ2.007
SDPS0015	The SDPS shall receive directives on priorities and policy, including schedule conflict resolutions, from the SMC.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SDPS0016	The SDPS shall coordinate and resolve schedule conflicts between IMS, DADS and PGS.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SDPS0050	The SDPS shall archive, manage, quality check, and account for the generated data products, and distribute the data products to the appropriate destinations as required	SFQ2.006 SFQ2.007
SDPS0091	The SDPS shall receive a quality report that is generated and transmitted by the PIs or the other science users, and appended to the data products being archived by the SDPS.	SFQ2.006 SFQ2.007
SDPS0130	The SDPS shall provide the capability for DAACs to exchange data products, browse data, metadata, data quality information, research results, and documentation.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.006 SFQ2.007 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011

Requirement	Description	Test Case(s)
SMC-1300	The SMC shall support and maintain the ECS policies and procedures regarding instrument and ground event scheduling, including, at a minimum: a. Mission and science guidelines b. Directives for scheduling instrument data ingest, processing, reprocessing, retrieval, and data distribution	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.006 SFQ2.007 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-1315	The LSM shall provide each element's scheduling function with access to the system-wide scheduling information, including, at a minimum: a. ECS policies and procedures regarding instrument and ground event scheduling b. Other element's plans and schedules c. Element allocations of ground event functions and capabilities d. Product generation information e. Scheduling directives for testing, maintenance, and emergency situations	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-1320	The SMC shall support and maintain priorities used in scheduling ground events.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-1325	The LSM shall provide the operations and management staff at a site or element the capability to communicate scheduling information to and receive scheduling information from the SMC, including, at a minimum: a. Routine scheduling information b. Request scheduling information c. Schedule conflict alert information d. Emergency scheduling information	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-1330	The SMC shall support and maintain the information for end-to-end data ingest, processing, reprocessing, archive, and data distribution for each product, including, at a minimum: a. Product information b. Product generation information c. Product delivery information	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011

Requirement	Description	Test Case(s)
SMC-1345	The LSM shall perform priority management services to resolve conflicts for ECS resources.	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-1360	The SMC shall generate ground resource scheduling directives, or recommendations for FOS elements, in response to emergency situations.	SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-1600	The SMC shall receive product generation schedules from the DAACs and analyze the schedules for cross-DAAC dependencies (e.g., inputs that must be generated and provided by one DAAC before a product can be generated at another DAAC).	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-1610	The SMC shall recommend adjustments in the product generation schedules to ensure that product generation functions and the DAAC-to-DAAC data transfers required, are accomplished in accordance with overall mission requirements (e.g., without the development of a product generation backlog at any DAAC).	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-3345	The LSM shall perform quality assurance for its site/element's performance as well as programmatic areas that includes, at a minimum: a. Quality testing, benchmarks and audits for element enhancement implementations b. Quality checking and audits of products processed and delivered c. Quality testing and audits of element resource performance	SFQ2.006 SFQ2.007
SMC-3350	The SMC shall generate, maintain, and update performance criteria and responses to performance deficiencies for system, site, and element resources and activities, such as: a. Data collection b. Product generation, QA and validation c. Reprocessing d. Data delivery to DAACs and to users e. Response to user requests f. Response to TOOs g. Response to field experiments h. Response to emergency situations	SFQ2.001 SFQ2.002 SFQ2.003 SFQ2.004 SFQ2.005 SFQ2.006 SFQ2.007 SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011
SMC-3390	The SMC shall generate alert indicators of fault or degraded conditions with the corrective actions.	SFQ2.008 SFQ2.009 SFQ2.010 SFQ2.011